

YALE UNIVERSITY
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May 19, 1947.

Dear Dr. Mather-

The manuscript to which I referred in my airmail letter is enclosed. There is no pressing reason why it should be returned unless that seems especially convenient.

Since that previous note, some data on a three-point test of linearity have appeared, which, I think are in line with the scheme you suggested-

The characters are: Lac- (lactose fermentation) $V_1^{r/s}$ (resistance to phage T1) and $V_6^{r/s}$ (resistance to phage T6).

In the cross :

$\begin{array}{c} A \quad B \quad C \quad D \quad E \\ B-M- \quad V_6^s \quad Lac+ \quad V_1^r \quad T+L+ \end{array} \times \begin{array}{c} B+M+ \quad V_6^r \quad Lac- \quad V_1^s \quad T-L- \end{array}$

The prototrophs (B+M+T+L+) fall into the following categories:

				V_1	V_6	#		
				r	r	23	-	3
				s	r	17	-	4
				r	s	1	123	2D
				s	s	0	124	C
				r	r	5	2	AD
				s	r	1	204	B
				r	s	14	-	1
				s	s	0	-	134

*removable that if only two lines involved
region 2 which is a smaller region.*
 Lac - : + = 41:20 Therefore Lac is linked to B-M
 V_6 r : s = 46:15 Therefore V_6 is linked to B-M.
 The data clearly show that V_6 is linked to Lac (parentals = new combinations are 54:7) These factors are therefore linearly linked. This is particularly well shown by the interaction with V_1 (e.g. 7 and 8) (or 1 and 3).
 The map therefore is:

B_1 B-M V_6 Lac V_1 T-L.

I realize that this is a rather small sample, but it is already extensive enough to be highly gratifying.

Yours sincerely,

Joshua Lederberg